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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,833

05/01/2006

Herbert Peusens

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11/26/2008

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EXAMINER

HANNON, CHRISTIAN A

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,833	Applicant(s) PEUSENS ET AL.	
	Examiner CHRISTIAN A. HANNON	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is response to applicant's response filed on 10/15/2008. Claims 1-9 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murtojarvi et al (US 6,393,260), hereinafter Murt.

Regarding claims 1 & 6, Murt teaches an RF circuit & method including a controllable mixer having at least one mixing transistor (Figure 4, Q10, Q11, Q13, Q14) to which mixing transistor an oscillator signal and an input signal are supplied (Figure 4, V_{LO+} , V_{LO-} , V_{RF+} , V_{RF-}) wherein the input signal comprises a useful signal and further signals or spurious signals (Column 3, Lines 27-31) wherein an output signal is produced as an output of the mixer (Figure 4, V_{OUT+} , V_{OUT-}) wherein a controller or digital controller is provided which applies a control signal or CTRL byte to the mixing transistor as a function of the signal quality of the demodulated output signal, or output signal (Column 3, Lines 27-43) wherein the operating point of the at least one mixing transistor can be set by means of the control signal (Column 3, Lines 36-43), in which case the intermodulation immunity and/or the noise in the output signal can be varied as

Art Unit: 2618

a function of the operating point of the at least one transistor (Column 3, Lines 41-43), however Murt fails to teach wherein a controllable portion of the overall gain of the RF circuit is determined by the operating point of the at least one mixing transistor. Murt does teach that the gain of the mixer can be varied in relation to the operating point of the at least one mixing transistor (Column 3, Lines 4-24). Therefore it follows that since the sum of the parts of the 'RF circuit' include the mixing transistor, varying said mixing transistor's gain has an effect on the overall gain of the circuit.

Regarding claim 2, Murt teaches claim 1, wherein a demodulator which is connected downstream from the mixer, a/d converter, and an evaluation circuit, controller, are provided for assessment of the signal quality of the demodulated output signal (Column 5, Lines 32).

Regarding claims 3 & 7, Murt teaches claims 2 & 6, wherein the evaluation circuit assesses the error rate of a digitally coded signal (Column 6, Lines 10-25).

Regarding claims 4 & 8, Murt teaches claims 1 & 6, wherein a memory is provided for recording initial values, on the basis of which the signal quality can be assessed and optimized (Column 5, Lines 32-42; Column 6, Lines 10-25).

Regarding claims 5 & 9, Murt teaches claims 4 & 8, wherein the initial values comprise information about a desired minimum signal quality, the symbol rate, the code rate, and or the modulation method and optimization routines for reception optimization can be selected as a function of the initial values (Column 5, Lines 64-67; Column 6, Lines 1-9).

Response to Arguments

3. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Oh et al (US 6,539,216) discloses a microwave frequency converting receiver.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2618

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTIAN A. HANNON whose telephone number is (571)272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. A. H./
Examiner, Art Unit 2618
November 13, 2008

/Edward Urban/

Supervisory Patent Examiner, Art Unit 2618

Application/Control Number: 10/577,833
Art Unit: 2618

Page 6